```
Gly Lys Asp Ser Val Lys Ala Pro Val Tyr Ser His Leu Thr Tyr Asp
    130             135             140
Arg Glu Glu Gly Val Phe Glu Val Val Glu Gln Ala Asp Ile Val Ile
145             150             155             160
Ile Glu Gly Ile Asn Val Leu Gln Ser Pro Thr Leu Glu Asp Asp Arg
            165             170             175
Glu Asn Pro Arg Ile Phe Val Ser Asp Phe Phe Asp Phe Ser Ile Tyr
        180             185             190
Val Asp Ala Glu Glu Ser Arg Ile Phe Thr Trp Tyr Leu Glu Arg Phe
        195             200             205
Arg Leu Leu Arg Glu Thr Ala Phe Gln Asn Pro Asp Ser Tyr Phe His
    210             215             220
Lys Phe Lys Asp Leu Ser Asp Gln Glu Ala Asp Glu Met Ala Ala Ser
225             230             235             240
Ile Trp Glu Ser Val Asn Arg Pro Asn Leu Tyr Glu Asn Ile Leu Pro
            245             250             255
Thr Lys Phe Arg Ser Asp Leu Ile Leu Arg Lys Gly Asp Gly His Lys
        260             265             270
Val Glu Glu Val Leu Val Arg Arg Val
    275             280
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<210> 62
<211> 1092
<212> DNA
<213> Bacillus subtilis

<220>
<221> CDS
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<400> 62
atg act aaa caa aca att cgc gtt gaa ttg aca tca aca aaa aaa ccg      48
Met Thr Lys Gln Thr Ile Arg Val Glu Leu Thr Ser Thr Lys Lys Pro
 1               5                   10                  15

aaa cca gac cca aat cag ctt tcg ttc gga aga gtg ttt aca gac cac      96
Lys Pro Asp Pro Asn Gln Leu Ser Phe Gly Arg Val Phe Thr Asp His
                20                  25                  30

atg ttt gta atg gac tat gcc gca gat aaa ggt tgg tac gat cca aga     144
Met Phe Val Met Asp Tyr Ala Ala Asp Lys Gly Trp Tyr Asp Pro Arg
            35                  40                  45

atc att cct tat caa ccc tta tca atg gat cca act gca atg gtc tat     192
Ile Ile Pro Tyr Gln Pro Leu Ser Met Asp Pro Thr Ala Met Val Tyr
     50                  55                  60

cac tac ggc caa acc gtg ttt gaa ggg tta aag gct tac gtg tca gag     240
His Tyr Gly Gln Thr Val Phe Glu Gly Leu Lys Ala Tyr Val Ser Glu
 65                  70                  75                  80
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gat gac cat gtt ctg ctt ttc aga ccg gaa aaa aat atg gaa cgc ctg      288
Asp Asp His Val Leu Leu Phe Arg Pro Glu Lys Asn Met Glu Arg Leu
                85                      90                  95

aat caa tca aac gac cgc ctc tgc atc ccg caa att gat gaa gaa cag      336
Asn Gln Ser Asn Asp Arg Leu Cys Ile Pro Gln Ile Asp Glu Glu Gln
            100                     105                 110

gtt ctt gaa ggc tta aag cag ctt gtc gca att gat aaa gac tgg att      384
Val Leu Glu Gly Leu Lys Gln Leu Val Ala Ile Asp Lys Asp Trp Ile
            115                     120                 125

cca aat gcg gag ggc acg tcc ctt tac atc cgt ccg ttc atc atc gca      432
Pro Asn Ala Glu Gly Thr Ser Leu Tyr Ile Arg Pro Phe Ile Ile Ala
            130                     135                 140

acc gag cct ttc ctt ggt gtt gcg gca tct cat acg tat aag ctc ttg      480
Thr Glu Pro Phe Leu Gly Val Ala Ala Ser His Thr Tyr Lys Leu Leu
145                     150                     155                 160

atc att ctt tct ccg gtc ggc tct tat tac aaa gaa ggc att aag ccg      528
Ile Ile Leu Ser Pro Val Gly Ser Tyr Tyr Lys Glu Gly Ile Lys Pro
                165                     170                 175

gtc aaa atc gct gtt gaa agt gaa ttt gtc cgt gcg gta aaa ggc gga      576
Val Lys Ile Ala Val Glu Ser Glu Phe Val Arg Ala Val Lys Gly Gly
            180                     185                 190

aca gga aat gcc aaa acc gca gga aac tat gct tca agc tta aaa gcg      624
Thr Gly Asn Ala Lys Thr Ala Gly Asn Tyr Ala Ser Ser Leu Lys Ala
            195                     200                 205

cag cag gta gcc gaa gag aaa gga ttt tct caa gta ctc tgg ctg gac      672
Gln Gln Val Ala Glu Glu Lys Gly Phe Ser Gln Val Leu Trp Leu Asp
            210                     215                 220

ggc att gag aag aaa tac atc gaa gaa gtc gga agc atg aac atc ttc      720
Gly Ile Glu Lys Lys Tyr Ile Glu Glu Val Gly Ser Met Asn Ile Phe
225                     230                     235                 240

ttc aaa atc aac ggt gaa atc gta aca ccg atg ctg aac ggg agc atc      768
Phe Lys Ile Asn Gly Glu Ile Val Thr Pro Met Leu Asn Gly Ser Ile
                245                     250                 255

ctg gaa ggc att acg cgc aat tca gtc atc gcc ttg ctt aag cat tgg      816
Leu Glu Gly Ile Thr Arg Asn Ser Val Ile Ala Leu Leu Lys His Trp
                260                     265                 270

ggc ctt caa gtt tca gaa cga aaa att gcg atc gat gag gtc atc caa      864
Gly Leu Gln Val Ser Glu Arg Lys Ile Ala Ile Asp Glu Val Ile Gln
            275                     280                 285

gcc cat aaa gac ggc atc ctg gaa gaa gcc ttc gga aca ggt aca gca      912
Ala His Lys Asp Gly Ile Leu Glu Glu Ala Phe Gly Thr Gly Thr Ala
            290                     295                 300

gct gtt att tcc cca gtc ggc gag ctg atc tgg cag gat gaa aca ctt      960
Ala Val Ile Ser Pro Val Gly Glu Leu Ile Trp Gln Asp Glu Thr Leu
305                     310                     315                 320

tcg atc aac aac ggt gaa aca gga gaa atc gca aaa aaa cta tat gac     1008
Ser Ile Asn Asn Gly Glu Thr Gly Glu Ile Ala Lys Lys Leu Tyr Asp
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```
Ser Ile Asn Asn Gly Glu Thr Gly Glu Ile Ala Lys Lys Leu Tyr Asp
            325                 330                 335
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acg att aca ggc att caa aaa ggc gct gtc gca gac gaa ttc gga tgg    1056
Thr Ile Thr Gly Ile Gln Lys Gly Ala Val Ala Asp Glu Phe Gly Trp
            340                 345                 350
```

```
acg acc gaa gtc gca gcg ctg act gaa agc aag taa                    1092
Thr Thr Glu Val Ala Ala Leu Thr Glu Ser Lys
            355                 360
```

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<210> 63
<211> 363
<212> PRT
<213> Bacillus subtilis
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<400> 63
Met Thr Lys Gln Thr Ile Arg Val Glu Leu Thr Ser Thr Lys Lys Pro
  1               5                  10                  15

Lys Pro Asp Pro Asn Gln Leu Ser Phe Gly Arg Val Phe Thr Asp His
             20                  25                  30

Met Phe Val Met Asp Tyr Ala Ala Asp Lys Gly Trp Tyr Asp Pro Arg
         35                  40                  45

Ile Ile Pro Tyr Gln Pro Leu Ser Met Asp Pro Thr Ala Met Val Tyr
     50                  55                  60

His Tyr Gly Gln Thr Val Phe Glu Gly Leu Lys Ala Tyr Val Ser Glu
 65                  70                  75                  80

Asp Asp His Val Leu Leu Phe Arg Pro Glu Lys Asn Met Glu Arg Leu
                 85                  90                  95

Asn Gln Ser Asn Asp Arg Leu Cys Ile Pro Gln Ile Asp Glu Glu Gln
            100                 105                 110

Val Leu Glu Gly Leu Lys Gln Leu Val Ala Ile Asp Lys Asp Trp Ile
            115                 120                 125

Pro Asn Ala Glu Gly Thr Ser Leu Tyr Ile Arg Pro Phe Ile Ile Ala
    130                 135                 140

Thr Glu Pro Phe Leu Gly Val Ala Ala Ser His Thr Tyr Lys Leu Leu
145                 150                 155                 160

Ile Ile Leu Ser Pro Val Gly Ser Tyr Tyr Lys Glu Gly Ile Lys Pro
                165                 170                 175

Val Lys Ile Ala Val Glu Ser Glu Phe Val Arg Ala Val Lys Gly Gly
            180                 185                 190

Thr Gly Asn Ala Lys Thr Ala Gly Asn Tyr Ala Ser Ser Leu Lys Ala
            195                 200                 205

Gln Gln Val Ala Glu Glu Lys Gly Phe Ser Gln Val Leu Trp Leu Asp
    210                 215                 220

Gly Ile Glu Lys Lys Tyr Ile Glu Glu Val Gly Ser Met Asn Ile Phe
```